

In This Issue: Teachable Moments for Patients, Practices, and Systems

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The ability to identify and act on a teachable moment¹ is one of the hidden reasons why systems based on primary care have better outcomes. Primary care increasingly routinizes and involves teams in preventive and chronic disease care. This is a good thing. But it masks the subtle value of a careful clinician or staff member recognizing when something has shifted in a patient's life that makes them amenable to changing a long-held belief or habit—an aunt's amputation makes a diabetic get serious about diet and activity, the divorce of a friend shakes a partner's complacency and foments re-investment in a relationship, a child's third episode of otitis media makes an incorrigible grandmother consider quitting smoking when the doctor mentions that having a smoker in the house doubles the risk of a child having an ear infection.

Health care professionals, and (I hopefully assert) even the health care system, is not immune to teachable moments.* I like to call them malleable moments,³ not just because I am a sucker for alliteration, but to emphasize that in every moment we all have the possibility of positive change,⁴ if only we can focus our attention on being the change we wish to see.⁵

This issue contains new knowledge about teachable moments, and the potential to create malleable moments for positively changing patients, practices, and systems.

Schmittziel et al examine the influence of a new diagnosis of diabetes on the health behaviors of patients' partners, and find small but significant (from both statistical and public health points of view) changes in a host of health behavior and preventive activities.⁶

A cluster-randomized clinical trial of an interactive booklet on childhood fever and out-of-hours primary care is found to apparently induce teachable moments for both families and the physicians who use it. Parents

show a reduced intention to re-consult for similar illnesses. The reduction in the primary outcome of antibiotic prescription for patients of physicians exposed to the booklet did not reach statistical significance, but pre-specified analysis of those using the booklet found a reduction in antibiotic prescriptions, and a reduction in overall medication prescriptions.⁷

Delacour et al find a strong association between alcohol consumption and leg cramps in general practice patients aged over 60 years.⁸ They don't find a dose-response effect, but I wonder if the immediacy of leg cramps could be a motivator for some patients for whom the long-term effects of alcohol overuse are not compelling.

In a prospective study, Valderas et al discover individual patient characteristics that predict new cases of multimorbidity.⁹ This finding could be used to foster teachable moments among patients with a single chronic illness who might be motivated to make changes to avoid an additional chronic condition.

A referral from a primary care to a behavioral health clinician frequently comes at a teachable moment. Pace et al examine whether a "warm hand-off" introducing patients to an integrated behavioral health clinician improves attendance at the follow up appointment. It doesn't. But having an intake appointment within 30 days of referral does.¹⁰

A fascinating article by Donner-Banzhoff examines the diagnostic process in general practice. He proposes that simple theories don't fit the large primary care problem space. But patients and clinicians collaborate in ways he calls "inductive foraging" that integrate both diagnosis and patient-centered consulting.¹¹

This issue also contains some teachable moments for clinicians, practices, and health care systems.

In a study of 43,382 US medical school graduates, Talamantes and colleagues discover that attendance at a community college is associated with subsequent training in a family medicine residency.¹² Noting that more than one-half of medical students come from families in the top 20% of income, and less than 5% of medical students have parents in the bottom 20% of

* Teachable moments happen when: "(1) the presence of a concern that is salient to the patient that is either obviously relevant to an unhealthy behavior, or through conversation comes to be seen as relevant; (2) a link that is made between the patient's salient concern and a health behavior that attempts to motivate the patient toward change; and (3) a patient response indicating a willingness to discuss and commit to behavior change."²

income, an editorial by Kost makes a strong case that admitting students from community colleges could help medical schools to do a better job of meeting their societal responsibility by training a physician workforce positioned to care for the disadvantaged.¹³

Patients increasingly are being provided with access to their electronic medical records, but there have been some concerns about whether this is a good idea for people with mental health issues. A research brief by Elmore and colleagues allays this concern, finding that patients viewing at least one of their clinic notes during a one-year period have similar perceptions of online access whether or not they have a mental health diagnosis.¹⁴

An evaluation of prominent mental health apps by Parker et al finds that mental health often is framed in ways that may promote medicalization of normal mental states and that implies individual responsibility for mental well-being.¹⁵

A study by Burt and colleagues examines physicians' communication skills from the perspectives of patients, trained clinical raters, and physicians themselves.¹⁶ The lack of correlation between physician self-ratings and the other ratings indicates that we physicians have limited awareness of how our communication skills are perceived by others.

A brief qualitative study by Havele et al finds that a compelling belief in the ability of blood glucose self-monitoring to promote lifestyle changes in patients with type 2 diabetes explains why physicians remain proponents of this practice despite evidence that self-monitoring increases costs without improving outcomes.¹⁷

A microsimulation model by Basu and colleagues estimates the conditions under which it would be financially viable to have a staff member enter patient history, place orders, and guide patients—in both fee-for-service and capitated payment.¹⁸

Three essays provide their own kinds of teachable moments. In light of the growing phenomenon of part-time practice, Bodenheimer sees ways that clinicians and practices can make a number of adjustments to foster continuity and relationships.¹⁹ Goodfellow suggests that care of patients suffering from the effects of interpersonal violence is improved simply by believing our patients' pain.²⁰ Kannai provides insights through her experience and reflection on how clinicians can overcome blind spots in grasping patients' complex inner struggles.²¹

The *Annals* feature on Innovations in Primary Care in this issue shares the experience of a family physician who has found ways to integrate rapid acupuncture into daily family practice.²²

We welcome you to join the online discussion for each of these and previously published articles at <http://www.AnnFamMed.org>.

Acknowledgments: Thanks to my colleague, Sue Flocke, who has been studying teachable moments for more than two decades. She notes that these moments are about the potential to see something in a different light. In clinical care, realizing the resulting potential for change hinges on clinicians' hearing patients' salient concerns, and if the time is right, helping patients to consider change. Teachable moments are co-created between patient and clinician.¹

References

1. Lawson PJ, Flocke SA. Teachable moments for health behavior change: a concept analysis. *Patient Educ Couns*. 2009;76(1):25-30.
2. Cohen DJ, Clark EC, Lawson PJ, Casucci BA, Flocke SA. Identifying teachable moments for health behavior counseling in primary care. *Patient Educ Couns*. 2011;85(2):e8-15.
3. Ruhe MC, Weyer SM, Zronek S, Wilkinson A, Wilkinson PS, Stange KC. Facilitating practice change: lessons from the STEP-UP clinical trial. *Preventive Medicine*. 2005;40(6):729-734.
4. Easwaran E. *Conquest of Mind*. Tomales, California: Nilgiri Press; 1988.
5. Easwaran E. *Gandhi the Man*. 3rd ed. Tomales, California: Nilgiri Press; 1997.
6. Schmittiel JA, Cunningham SA, Adams SR, Nielson J, Ali MK. Influence of a new diabetes diagnosis on the health behaviors of a patient's partner. *Ann Fam Med*. 2018;16(4):290-295.
7. de Bont EGPM, Dinant G, Elshout G, et al. Booklet for childhood fever in out-of-hours primary care: a cluster-randomized controlled trial. *Ann Fam Med*. 2018;16(4):314-321.
8. Delacour C, Chambe J, Lefebvre F, et al. Association between alcohol consumption and nocturnal leg cramps in patients over 60 years old: a case-control study. *Ann Fam Med*. 2018;16(4):296-301.
9. Mounce LTA, Campbell JL, Henley WE, Tejerina Arreal MC, Porter I, Valderas JM. Predicting incident multimorbidity. *Ann Fam Med*. 2018;16(4):322-329.
10. Pace CA, Gergen-Barnett K, Veidis A, et al. Warm handoffs and Attendance at Initial Integrated Behavioral Health Appointments. *Ann Fam Med*. 2018;16:346-348.
11. Donner-Banzhoff N. Solving the diagnostic challenge: a patient-centered approach. *Ann Fam Med*. 2018;16(4):353-358.
12. Talamantes E, Jerant A, Henderson MC, et al. Community college pathways to medical school and family medicine residency training. *Ann Fam Med*. 2018;16(4):302-307.
13. Kost A. Building a pipeline to equity. *Ann Fam Med*. 2018;16(4):288-289.
14. Klein JW, Peacock S, Tsui JI, O'Neill SF, DesRoches CM, Elmore JG. Perceptions of primary care notes by patients with mental health diagnoses. *Ann Fam Med*. 2018;16(4):343-345.
15. Parker L, Bero L, Gillies D, et al. Mental health messages in prominent mental health apps. *Ann Fam Med*. 2018;16(4):338-342.
16. Burt J, Abel G, Elliott MN, et al. The evaluation of physicians' communication skills from multiple perspectives. *Ann Fam Med*. 2018;16(4):330-337.
17. Havele SA, Pfoh ER, Yan C, Misra-Hebert AD, Le P, Rothberg MB. Physicians' views of self-monitoring of blood glucose in patients with type 2 diabetes not on insulin. *Ann Fam Med*. 2018;16(4):349-352.
18. Basu S, Phillips RS, Bitton A, Song Z, Landon BE. Finance and time use implications of team documentation for primary care: a microsimulation. *Ann Fam Med*. 2018;16(4):308-313.
19. Bodenheimer T, Haq C, Lehmann W. Continuity and access in the era of part-time practice. *Ann Fam Med*. 2018;16(4):359-360.
20. Goodfellow A, Bone C, Gelberg L. They didn't believe her pain: my education in interpersonal violence. *Ann Fam Med*. 2018;16(4):361-363.
21. Kannai R, Alon A. On blindness and blind spots. *Ann Fam Med*. 2018;16(4):364-366.
22. Koda EK. Fully integrating medical acupuncture into family medicine. *Ann Fam Med*. 2018;16(4):367-367.

Building a Pipeline to Equity

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The US health care system is full of broken promises. Education is supposed to be the great equalizer, yet for many students a medical education remains out of reach. Over 10 years ago the Association of American Medical Colleges looked at the economic diversity of medical students by parental income and found that an astounding 50% or more come from families in the top 20% of income.¹ Those with parents in the bottom 20% made up less than 5% of future physicians. Although patients come from all economic levels, their physicians do not reflect this. Medicine continues to have an over-representation of white people and a corresponding under-representation of people who identify as African American, Native American, or Latino/a.² These disparities in race and class have real impacts, as implicit bias can influence the care provided and patients, understandably, would like to be cared for by someone similar to themselves.³ Furthermore, students from disadvantaged backgrounds are more likely to end up caring for patients who also face disadvantage.⁴

Our current medical school output largely reflects a group of people privileged by both race and class. At the same time, despite all evidence that suggests a robust primary care workforce can improve the health of the public, less than 10% of US medical graduates enter family medicine residencies each year.^{5,6} When finished with their medical education, practicing physicians do not distribute themselves uniformly, with persistent workforce shortages in rural areas and at community health centers that serve impoverished and disadvantaged populations.^{7,8} Taken together, medical schools are largely inaccessible to all but a privileged few and produce a workforce that does meet the needs of patients, either by specialty or demographics.

But what if there was one thing that could help change all of this? There is, and you probably have one in your neighborhood. It's called community college and it has the potential to help address the failings of medical schools currently. Talamantes and colleagues studied medical student community college exposure, demographics, and specialty choice and report that students with community college experience are more likely to come from underrepresented backgrounds and more likely to enter family medicine, compared with students without such experience.⁹ In this way, community college represents an important yet undervalued asset to promote health equity for our patients through a robust and diverse primary care workforce and a means of promoting educational equity for the vast majority of students whose parents are not in the top quintile of income.

The pathway from community college to medical school is complex and ill-defined. Students can attend community college during high school, before or after obtaining a bachelor's degree. Some students use community college to augment their education while others use it as a stepping stone on the way to other educational endeavors. The authors specifically looked at these different paths to see if they constituted different populations of students. What they found is that they probably do. Nevertheless, after adjusting for known demographic cofounders, attending community college for any reason made it more likely for a student to enter family medicine, and to be from a group underrepresented in medicine. Perhaps neither of these findings come as much of a surprise. Of all higher educational institutions, community college might be the easiest to access, regardless of economic or social background.¹⁰

How should medical schools and family medicine departments respond to these findings given the dual context of who currently has access to medical education and the workforce needs of the country? These findings suggest that we take a hard look at how we think about medical school admissions and the value we assign community college education versus a traditional 4-year degree.¹¹ Community college should not be a barrier for medical school admission. On the con-

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trary, it should be valued for not only the education it provides, the spaces it builds and offers disadvantaged students, but also for the pipeline it creates for those who otherwise could not apply to medical school.

Furthermore, medical schools and family medicine departments should consider their role of reaching further back into the pipeline to students currently enrolled in community college. They should capitalize on existing collaborations and build new ones to strengthen the pipeline and lay down a clear path between educational institutions. As Talamantes points out, some states are already exploring such collaborations. This study looked only at specialty outcome; a further area of research includes examining if medical students with community college experience are more likely to enter residencies that focus on preparing them for practice in medically underserved areas. Investigating eventual practice location outcomes will also be critical to strengthening the argument that students from community college end up serving the patients most in need. As family doctors, we need to engage in this capacity building and research work for our patients, so the next generation of physicians better reflects their diversity, and also for ourselves, to ensure that there are people who care for our patients when we are gone. Finally, we need to do it for our students, with the aim of improving educational equity in this country. Every patient deserves a family physician and every student deserves an opportunity to become that family physician.

To read or post commentaries in response to this article, see it online at <http://www.AnnFamMed.org/content/16/4/288>.

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References

1. Jolly P. *AAMC Analysis In Brief*. Washington, DC: Association of American Medical Colleges; 2008. *Diversity of U.S. Medical Students by Parental Income*; vol 8, no 1. <https://www.aamc.org/download/102338/data/aibvol8no1.pdf>.
2. Association of American Medical Colleges. Applicants and matriculants data. <https://www.aamc.org/download/321474/data/factstablea9.pdf>. Accessed May 29, 2018.
3. Shen MJ, Peterson EB, Costas-Muñiz R, et al. The effects of race and racial concordance on patient-physician communication: a systematic review of the literature. *J Racial Ethn Heal Disparities*. 2018; 5(1):117-140.
4. Walker KO, Moreno G, Grumbach K. The association among specialty, race, ethnicity, and practice location among California physicians in diverse specialties. *J Natl Med Assoc*. 2012;104(1-2):46-52.
5. Council on Graduate Medical Education. Twentieth report: advancing primary care. <https://www.hrsa.gov/advisorycommittees/bhpradvisory/cogme/Reports/twentiethreport.pdf>. Published Dec, 2010.
6. American Academy of Family Physicians. 2018 match results for family medicine. <https://www.aafp.org/medical-school-residency/program-directors/nrmp.html>. Published 2018. Accessed May 29, 2018.
7. MacDowell M, Glasser M, Fitts M, Nielsen K, Hunsaker M. A national view of rural health workforce issues in the USA. *Rural Remote Health*. 2010;10(3):1531.
8. Rosenblatt RA, Andrilla CH, Curtin T, Hart LG. Shortages of medical personnel at community health centers: implications for planned expansion. *JAMA*. 2006;295(9):1042-1049.
9. Talamantes E. Community college pathways to medical school and family medicine residency training. *Ann Fam Med*. 2018;16(4):302-307.
10. Bragg DD. Community college access, mission, and outcomes: considering intriguing intersections and challenges. *Peabody J Educ*. 2001;76(1):93-116.
11. Talamantes E, Mangione CM, Gonzalez K, Jimenez A, Gonzalez F, Moreno G. Community college pathways: improving the U.S. physician workforce pipeline. *Acad Med*. 2014;89(12):1649-1656.

CORRECTIONS

Ann Fam Med 2018;16:289. <https://doi.org/10.1370/afm.2281>.

There is an error in the abstract for: Weidner AKH, Phillips RL, Fang B, Peterson LE. Burnout and scope of practice in new family physicians. *Ann Fam Med*. 2018;16(3):200-205. The 2nd sentence of the Results section of the Abstract begins, "In bivariate analysis, elements of scope of practice associated with higher burnout..."

The correct sentence should read, "In bivariate analysis, elements of scope of practice associated with lower burnout rates included providing more procedures/clinical content areas (mean procedures/clinical areas: 7.49 vs 7.02; $P = .02$) and working in more settings than the principal practice site (1+ additional settings: 57.6% vs 48.4%; $P = .001$); specifically in the hospital (31.4% vs 24.2%; $P = .002$) and patient homes (3.3% vs 1.5%; $P = .02$)." The authors regret the error.

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There was a typo in the print version of Barba C, Hammond S, Hammond RS. The patient profile: improving treatment adherence. *Ann Fam Med*. 2018;16(3):271.

In the 3rd paragraph of the Learning section, the print version says, "Data also showed that most of our patients with hemoglobin A_{1c} ≥ have intermediate health literacy levels." The value should have been ≥9 and is correct in the online version of the journal available at <http://www.AnnFamMed.org/content/16/3/271/>. The *Annals* regrets the error.